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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/795,038	02/05/97	STREETS R	BENHAM, 002

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EXAMINER
WALLENHORST, M

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 03/30/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

08/795,038

Applicant(s)

Streets et al.

Examiner

Wallenhorst

Group Art Unit

1743

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-18 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-18 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☒ The specification is objected to by the Examiner.
- ☒ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2
- ☐ Interview Summary, PTO-413
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

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1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not state that the inventor is a joint inventor of the invention claimed.

The title of the invention is missing in the declaration.

2. The disclosure is objected to because of the following informalities: On page 9, line 13 of the specification, the phrase "Fig. 8" should be changed to --Figures 8A and 8B-- since there is a figure 8A and 8B depicted in the drawings. On page 18, line 8, the phrase "pig 40" should be changed to --pig 42-- since reference numeral 42 refers to the pig. On page 19, line 10, the phrase "Fig. 7" should be changed to --Figures 8A and 8B-- since it is figures 8A and 8B which depict the logic diagrams.

Appropriate correction is required.

3. Claims 4-5 and 9-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On lines 2-3 of claim 4, the phrase "a clean-in-place chamber" should be changed to --the clean-in-place chamber-- since this chamber has already been positively recited in claim 1.

On line 2 of claim 5, a comma should be inserted after the word "thereon". On lines 3-4 of claim 5, the phrase "wherein the pig launching station includes a pig parking chamber, with an

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interior diameter..." should be changed to --wherein the pig parking chamber has an interior diameter...-- since the pig parking chamber has already been positively recited in claim 1.

On line 1 of claim 9, the word --to-- should be inserted after the word "connected" so that the claim makes proper sense.

On line 2 of claim 12, the word "an" should be changed to --and-- so that the claim makes proper sense. On line 2 of claim 12, the phrase "a pipeline" should be changed to --said pipeline-- so that it is clear that the pig catching station is connected to the same pipeline as the pig launching station.

On line 1 of claim 13, the word "in" should be deleted so that the claim makes proper sense. On line 4 of claim 13, the phrase "a pipe line" should be changed to --said pipeline--. On line 9 of claim 13, the phrase "the said area of smaller diameter" should be changed to --the area of smaller interior diameter-- for further clarification.

On line 6 of claim 16, the word "fluid" should be changed to --a cleaning solution-- so as to be consistent with the cleaning solution recited later in the claim.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

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made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashina et al. in view of the brochure on the Tuchenhausen product recovery system (both submitted in the Information Disclosure Statement filed on February 5, 1997).

Takashina et al. teach of a product recovery system and a method and apparatus for cleaning a piping which is used to deliver a product. The apparatus comprises a launcher 4 for projecting a pig 1 located at a supply end of a pipeline 37, and a catcher 36 for receiving the pig 1 at an opposite destination end of the pipeline 37. A compressed gas is supplied from a feed nozzle of the launcher to thereby send the pig to the catcher 36. The compressed gas is then

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discharged through a discharge nozzle 29 of the catcher 36, when the pressure is decreased and the pig is stopped. The decrease of the pressure is detected by a pressure sensor 33 of the launcher 4. When the pig arrives at the catcher 36, it is detected by a pressure sensor 33 of the catcher 36. Compressed gas is supplied from a feed nozzle 22 of the catcher 36 based on the detecting signal of the pressure sensor 33 of the launcher 4 to thereby send the pig towards the launcher 4. The reciprocating motion of the pig is executed by opening and closing of electromagnetic valves of the launcher 4, catcher 36 and main piping 37 by means of a controller. The residue in the main piping 37 can be removed efficiently during the going and return trips of the pig through the piping. Each of the launcher and catcher is provided with a sensor to detect the arrival of the pig and a control means for feeding a compressed fluid on the basis of the detecting signal of the sensor to thereby send the pig in a direction opposite to that when the pig is advanced towards the catcher or launcher. The control means is provided with a valve mechanism for opening and closing the channels of the feed ports and discharge ports for feeding and discharging a compressed fluid to press the pig forward. The launcher 4 is located outside of the primary product flow through main piping 37 by being mounted to the main piping 37 via a flange 5 at one end thereof, having an inner cylinder 6 of substantially the same inner diameter as that of the main piping. The primary product flows from the main piping 37 to a branch pipe 38. With the apparatus taught by Takashina et al., the main piping can be cleaned by reciprocation of the pig 1, and it is not necessary to remove the pig from the catcher 36 and install it again in the launcher 4. Takashina et al. fail to teach that the catcher 36 includes a clean-in-place chamber for

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holding the pig while the pig is cleaned without removing the pig from the product recovery system.

The brochure on the Tuchenhausen product recovery system teaches of a fully enclosed product recovery system which prevents contamination from external sources as well as cross contamination between batches. In this system, the pig does not have to be physically removed for manual cleaning, nor physically returned from the receiving station to the launching station. The system includes a clean-in-place chamber for the pig, and the entire process is automated. The primary components of the product recovery system are the pig catching station, the pig cleaning station and the pig itself. The pig catching pipe is used for receiving the pig after product push-out. During production and cleaning, the pig is firmly held in the pig cleaning station. Easy installation of the pig stations allows their integration into existing production lines. The pig cleaning station is integrated in-line into the product path and can be flexibly used as either the launching station and/or the receiving station. Cleaning solutions are directly conveyed through the station. The pig is firmly positioned inside of the station and flooded by the cleaning solution. Supply valves are present in the system for driving the pig and cleaning solution inside of the pipeline. The system taught by the Tuchenhausen brochure ensures hygienic integrity, safe operation due to the piped, closed system, no disassembly of the pig stations for operational and cleaning purposes, full integration into existing pipeline systems and fully automatic clean-in-place pig stations.

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Based upon the combination of Takashina et al. and the brochure on the Tuchenhausen product recovery system, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to provide the catcher 36 taught in the product recovery system of Takashina et al. with a clean-in-place chamber for holding the pig while the pig is cleaned without removing the pig from the product recovery system, as taught by the Tuchenhausen brochure, since the clean-in-place system for the pig disclosed in the Tuchenhausen system ensures hygienic integrity, safe operation due to the piped, closed system, no disassembly of the pig stations for operational and cleaning purposes and full integration into existing pipeline systems. By providing the system taught by Takashina et al. with the clean-in-place chamber for the pig taught by the Tuchenhausen brochure, the main piping can be cleaned by reciprocation of the pig 1 while it is not necessary to remove the pig from the catcher 36 and install it again in the launcher 4 and while it is not necessary to remove the pig from the system for separate cleaning before being reintroduced to the launcher 4. It also would have been obvious to one of ordinary skill in the art to utilize a ribbed pig in the system taught by Takashina et al. since Takashina et al. teach that any elastomeric pig can be used and since ribbed pigs provide an enhanced seal and cleaning ability.

8. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the brochure on the Tuchenhausen product recovery system. For a teaching of this brochure, see previous paragraphs in this Office action.

The Tuchenhausen brochure teaches of a product recovery system as substantially claimed, with the exception of including a pig parking chamber for the pig outside of the primary product



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flow. However, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to include a pig parking chamber for the pig in the system taught by the Tuchenhausen brochure outside of the primary product flow so as not to block the flow of the product through the primary pipeline and to avoid having any product adhere to the pig, thereby making it easier to clean the pig. It also would have been obvious to one of ordinary skill in the art to utilize a ribbed pig in the system taught by the Tuchenhausen brochure since ribbed pigs provide an enhanced seal and cleaning ability.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please make note of: Vowles, Smith, Barry, Barry et al., Davis and Valentine et al. who all teach of different devices for cleaning pipelines.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is (703) 308-3912. The examiner can normally be reached on alternate Mondays and every Tuesday and Wednesday from 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mmw

March 24, 1998

*Maureen M. Wallenhorst*  
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PRIMARY EXAMINER  
GROUP ~~1000~~ 1700